

USSR

TEL'KSNIS LAYMUTIS

"Suboptimal Determination of Changes in Properties and Recognition of Random Signals"

Stat. Probl. upr. Tr. Seminara. Vyp. 1 [Statistical Problems of Control, Works of a Seminar, No 1 -- Collection of Works], Vil'nyus, 1971, pp 76-86 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V345 by Ye. Troitskiy).

Translation: This work is a continuation of earlier works by the author (RZhMat, 1971, 1V223, 1V103). It is suggested that in place of the a posteriori probability  $\beta(n_1 | \bar{X})$  (where  $n_1$  is the moment of a change in properties of the process,  $\bar{X}$  is the observed vector readings of the process  $X(t)$ ), we calculate the function  $\Delta\beta(n_1) = \sum_{0 < i < n_1} W(i_1, i) \Delta\beta(i)$ , where

$\Delta\beta(i) = \beta(i|\bar{X}) - \beta((i-1)|\bar{X})$ ,  $W(n_1, i)$  are the smoothing factors, and use the value of  $n_1^*$  for which function  $\Delta\beta$  changes its sign as an estimate of the moment of change of properties of process  $X(t)$ . The procedure sug-  
1/2

TEL'KSNIS LAYMUTIS, Stat. Probl. upr. Tr. Seminara. Vyp 1, Vil'nyus, 1971, pp. 76-86.

gested significantly reduces the volume of calculation required. Considerations are presented concerning the selection of smoothing factors  $W(n_1, i)$ . An example is studied, when the process up to moment  $u_i$  has correlation function  $K_1(\theta, \tau) = D_1 \exp\{-\alpha_1 |\theta - \tau|\}$  ( $u_0 < \theta, \tau < u_i$ ), and after moment  $u_i$  -- function  $K_2(\theta, \tau) = D_2 \exp\{-\alpha_2 |\theta - \tau|\}$  ( $u_i < \theta, \tau < u_2$ ). The data from statistical experiments are presented for the example in question.

2/2

- 37 -

USSR

TEL'KSNIS LAYMUTIS, CHERNYAUSKAS VALENTINAS

"Determination of Changes in Properties of Random Signals"

Stat. Probl. upr. Tr. Seminara. Vyp. 1 [Statistical Problems of Control, Works of a Seminar, No 1 -- Collection of Works], Vil'nyus, 1971, pp 9-30 (Translated from Referativnyy Zhurnal, Kibernetika, No 1, 1973, Abstract No 1 V342 by Ye. Troitskiy).

Translation: This work is a continuation of earlier works by the authors ("Determination of the Most Probable Moment of Change of the Nature of a Random Process," Nelineynye i Optimal'nye Sistemy [Nonlinear and Optimal Systems -- Collection of Works], Moscow, Nauka Press, 1971), (Tel'ksnis, L. A., "Determination of the Most Probable Moment of Change of Properties of Random Signals," Avtomatika i Vychislitel'naya Tekhnika, No 1, 1970). It is suggested that a certain modification of a posteriori probability  $\beta(u|\bar{X})$  be used (where  $u$  is the moment of change of properties of process  $X(t)$ ,  $\bar{X} = X_1, \dots, X_N$  is the vector of readings of the process), allowing the number of additions necessary in calculation of  $\beta(u|\bar{X})$  to be reduced by a factor of  $N$ . The determinants of correlation matrices  $|(\kappa_{ij})|$  can be calculated by using the apparatus of the theory of orthogonal poly-

1/2

TEL'KSNIS LAYMUTIS, CHERNYAUSKAS VALENTINAS, Stat. Probl. upr. Tr.  
Seminara. Vyp. 1, Vil'nyus, 1971, pp 9-30.

nomials in a unit circle with a weight equal to the spectral density of process  $X(t)$ . Examples of calculations of functions  $\beta(u|\bar{X})$  are presented, when process  $X(t)$  is described up to moment in time  $u$  by correlation function  $K_1(\theta, \tau)$ , and after moment  $u$  by function  $K_2(\theta, \tau)$ . For these examples, data from statistical experiments are presented. In the case when the process  $X(t)$  does not change its statistical properties in the interval  $[0, T]$ , it is suggested that the form of the function  $\beta(u|\bar{X})$  be used to distinguish processes with correlation functions  $K_1(\theta, \tau)$  and  $K_2(\theta, \tau)$ .

2/2

- 34 -

1/2 019

UNCLASSIFIED

PROCESSING DATE--30 OCT 70

TITLE--POLYMER COATING OF GLASS AEROSOL BALLOONS -U-

AUTHOR--(04)-NEUGODOV, P.P., BASHURA, G.S., TELLERMAN, L.S., MOGVARELI,  
V.A.  
COUNTRY OF INFO--USSR

SOURCE--KHIM.-FARM. ZH. 1970, 4(2), 37-42

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PLASTIC COATING, GLASS COATING, AEROSOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1359

STEP NO--UR/0450/70/004/002/0037/0042

CIRC ACCESSION NO--AP0125007

UNCLASSIFIED

"APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002203230011-7

272 019

CIRC ACCESSION NO--AP0125007

UNCLASSIFIED

PROCESSING DATE--30 OCT 70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW WITH 15 REFS. ON THE  
MANUF. OF POLYMER COATED GLASS CONTAINERS FOR AEROSOLS. FACILITY:  
KHARKOV. NAUCH.-ISSLED. KHIM.-FARM. INST., KHARKOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R002203230011-7"

USSR

Aerosols

UIC: 615.014.83:666.25

NEUGODOV, P.P., BASHURA, G.S., TELLERMAN, L.S., MDGVARELI, V.A., Khar'kov Scientific Research Chemico Pharmaceutical Institute, Kharkov, Ministry of Health Ukrainian SSR

"Coating Glass Aerosol Cylinders With Protective Polymeric Films"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 2, Feb 70, pp 37-42

**Abstract:** Glass cylinders, when manufactured to quality standards, can withstand very high pressure, usually exceeding  $40 \text{ kg/cm}^2$ . Optimal cylinder configuration ensuring the best combination of strength and use convenience was determined experimentally -- the shape of a spindle with flat bottom and top opening for the valve. However, cylindrical and oval shapes also meet basic requirements. Plastic coatings of powdered polymers are deposited and the cylinders are placed in an oven to fuse the coating, and then cooled. Optimal thickness of the coatings varies from 0.8 to 1 mm, rupture strength is  $96 \text{ kg/cm}^2$ , and relative elongation is 180-250 percent.

1/1

USSR

SAMSONOV, G. V., GORYACHEV, Yu. M., KOVENSAYA, B. A., and  
TEL'NIKOV, Ye. Ya.

UDC: 539.192

"Electron Spectrum and Physical Characteristics of Titanium,  
Vanadium, and Chromium Diborides"

Tomsk, Izvestiya VUZ--Fizika, No 6, 1972, pp 37-42

**Abstract:** An account is given of the theoretical computations of the electronic spectra for titanium, vanadium, and chromium diborides by the NÖLKAO /expansion unknown/ method, otherwise known as the strong bonding method, which makes it possible to obtain a redistribution of the electrons from the shells of isolated atoms to the orbitals of solid compounds. The purpose of the computation is to obtain information regarding the relative contribution of the electronic states of the metal and the boron to the bonding energy and the physical characteristics of the boride and the redistribution of the electrons for a change in the number of the metal's d-electrons. It is noted that the results of the computations explain the basic laws for the formation of the physico-chemical characteristics of this type of compound. The authors are connected with the Institute of Material Behavior Problems, Ukrainian Academy of Sciences.

1/1

- 63 -

USSR

UDC: 621.362.2(088.8) ✓-1

SAMSONOV, G. V., GORYACHEV, Yu. M., KUTSENOK, T. G., RADZIKOWSKAYA, S. V.,  
TEL'NIKOV, Ye. Ya., Institute of Problems in the Science of Materials,  
Academy of Sciences of the UkrSSR

"A Thermoelectric Material Based on Cerium Sulfide"

USSR Author's Certificate No 251037, filed 28 May 68, published 22 Jan 70  
(from RZh-Elekrotehnika i Energetika, No 10, Oct 70, Abstract No 10A162 P)

Translation: A thermoelectric material based on N-type cerium sulfide is proposed. As a distinguishing feature of the patent, the thermoelectric figure of merit is improved by doping CeS<sub>1.35-1.37</sub> with 1-2 at.% Nb.

1/1

- 92 -

1/2 040

UNCLASSIFIED

PROCESSING DATE--23OCT70  
-U-

TITLE--USE OF GLASS FIBER REINFORCED PLASTICS IN AIRCRAFT FOR CROP DUSTING

AUTHOR-(05)-SAKALLY, M.TS., GOLUBEVA, L.I., BALASHOV, A.YA., PLATONOVA,  
~~V.N.~~ TELNOV, N.T.  
COUNTRY OF INFO--USSR

SOURCE--PLAST. MASSY 1970, (2), 58-9

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, BIOLOGICAL AND MEDICAL SCIENCES, AERONAUTICS,  
AGRICULTURE

TOPIC TAGS--CROP DUSTING, AIRCRAFT MATERIAL, GLASS FIBER, REINFORCED  
PLASTIC, POLYETHYLENE, PHOSPHATE, CHEMICAL STABILITY, CONTAINER/(U)VPS7  
GLASS REINFORCED PLASTIC, (U)1111 SM GLASS REINFORCED PLASTIC, (U)PNI  
GLASS REINFORCED PLASTIC, (U)EF32 0301 REINFORCED PLASTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED  
PROXY REEL/FRAME--1997/0663

STEP NO--UR/0191/70/000/002/0058/0059

CIRC ACCESSION NO--AP0119571

UNCLASSIFIED

2/2 040

CIRC ACCESSION NO--APO119571

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CORROSION RESISTANCE OF LOW D. POLYETHYLENE (I) AND OF SEVERAL GLASS FIBER REINFORCED PLASTICS, E.G., VPS-7, 11-ED SM, EF 32-0301, AND PN-1 WAS STUDIED TO DEVELOP A SUITABLE CONTAINER FOR BORDEAUX MIXT. AND SUPERPHOSPHATES (USED FOR CROP DUSTING AND SPRAYING). A VPS-7 CONTAINER (PRESSURE COATED WITH I) HAD SUPERIOR WEAR RESISTANCE AND CHEM. STABILITY. CONNECTING METAL TUBES AND SPRAYING HOSES WERE ALSO REPLACED BY VPS-7 REINFORCED I TUBES.

UNCLASSIFIED

REEL #32  
STEPANOV, K.N.  
to  
TELNOV, N.T.